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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,931	06/01/2001	Christian Hentschel	PHNL 010327	3260

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EXAMINER

BUGG, GEORGE A

ART UNIT PAPER NUMBER

2613

DATE MAILED: 06/16/2004

16

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/872,931

Applicant(s)

HENTSCHEL ET AL.

Examiner

George A Bugg

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 20-24 and 27-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24 and 27-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 02/05/04 have been fully considered but they are not persuasive. While the Examiner may have confused the claim limitations cited in claim 20, the cited passages of the Peng reference clearly teach an IDCT being controlled by the controller. Furthermore, Figure 2 shows the VLC, the IQ, the MC, and IDCT all connected to a controller, which is sending information to each element cited in claim 20. Again it should be noted that each element is being controlled by the controller, and thus the claimed limitations are met.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the elements and/or labels of each part as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement

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sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 20-24, and 27-40 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent Application Publication No. US 2002/0122601 A1 to Peng.

The applied reference has a common inventor, as well as a common assignee, with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention

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disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

5. As for claim 20, Applicant claims a ***scalable MPEG-2 compatible video decoder***. The title of the Peng reference discloses a scalable MPEG-2 decoder. Claim 20 further requires ***a variable length decoder (VLD), an inverse quantizer (IQ) coupled to a VLD, an inverse discrete cosine transform (IDCT) coupled to an IQ, a motion compensator (MC) coupled to a VLD, a summing junction coupled to the IDCT and the MC, and a controller coupled to at least one of a VLD, IQ, IDCT, or MC***. Figure 2 of the Peng reference shows a VLD coupled to an IQ, which is turn coupled to an IDCT. In addition, Figure 2 shows an IDCT and MC coupled together by a summing junction, as well as the MC being coupled to the VLD. Element 26, of Figure 2, is a controller which is coupled to the VLD, IQ, IDCT, and the MC. Additionally, claim 20 requires that ***the at least one of the VLD, IQ, IDCT, and MC is coupled to a controller and responsive thereto to operate in one of a plurality of modes each having a given complexity characteristic for an acceptable distortion level of an output of the decoder, and wherein the controller selects a mode based upon given complexity characteristics.*** Sections 25-28 discloses that an IDCT algorithm that eliminates high frequency components may achieve both computational reduction, and acceptable picture quality. However, Peng further states that as additional computational savings is required, degradation of picture quality will increase. The solution is to prune, or not process data that has not been selected for processing. The

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amount of pruning needed is dependent upon the complexity of the IDCT algorithm.

Peng states, in Section 28, that there is a complexity level associated with each IDCT algorithm, which also corresponds to a pruning pattern, and once the appropriate complexity level is determined an IDCT scaling algorithm is selected. A plurality of IDCT algorithm is equivalent to plurality of modes. Moreover, as stated, each algorithm is associated with its own complexity level, which in turn corresponds to a pruning pattern, which is used for computational reduction, while maintaining acceptable picture quality, or, as claimed, an acceptable distortion level. Furthermore, Peng states that once the appropriate complexity level is determined an IDCT scaling algorithm is selected. In other words, a mode is selected based on complexity.

6. As for claim 21, the mode is selected based on complexity level, as stated in Section 28. Complexity level is synonymous with available computing resources, as claimed. Furthermore, it is used to operate the IDCT.

7. As for claim 22, Figure 4 of the Peng reference shows multiple IDCT algorithms, which are selected in response to the controller 26.

8. As for claim 23, each algorithm can be a different mode, therefore, modes are determined by which IDCT algorithm is selected.

9. As for claim 24, selecting a mode of operation with the most efficient complexity to distortion characteristic is taught by the fact that Peng discloses that each algorithm is associated with its own complexity level, which in turn corresponds to a pruning pattern, which is used for computational reduction, while maintaining acceptable picture quality, or, as claimed, an acceptable distortion level.

10. With regard to claims 27 and 37, Sections 25-28 refer to a pruning process, synonymous with a scaling, and furthermore is carried out by the IDCT, which is controlled or responsive to the controller.

11. With regard to claims 28 and 38, Peng states, in Section 28, that there is a complexity level associated with each IDCT algorithm, which also corresponds to a pruning pattern, and once the appropriate complexity level is determined an IDCT scaling algorithm is selected. A plurality of IDCT algorithm is equivalent to plurality of modes, each of which has a different complexity.

12. As for claims 29 and 39, the mode is selected based on complexity level, as stated in Section 28. Complexity level is synonymous with available computing resources, as claimed.

13. As for claims 30, 31, and 40, as shown in Figure 4 the controller is connected to a complexity budget, as well as a data pruning control, which includes a look up table (memory). As previously discussed, Sections 26-28 disclose that each algorithm or mode is associated with its own complexity level, which in turn is equivalent to available system resources. That is to say that complexity levels are chosen based on available resources.

### ***Conclusion***

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George A Bugg whose telephone number is (703) 305-2329. The examiner can normally be reached on Monday-Thursday 7:30 - 6:00.

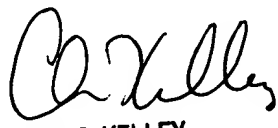
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher S Kelley can be reached on (703) 305-4856. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

George A Bugg  
Examiner  
Art Unit 2613

GAB

June 10, 2004

  
CHRIS KELLEY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

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